

Improving operational efficiency and the quality of care with the MC75A



Motorola's MC75A Series Enterprise Digital Assistant (EDA) puts real-time mobile voice and data capabilities in the hands of your healthcare workers inside healthcare facilities and out in the field. These compact, rugged yet lightweight devices provide seamless and secure instant access to critical information at the point of activity.

The challenge: lack of information access at the point of action

Lack of information at the point of care creates process inefficiencies that increase costs and the opportunity for errors. Without direct access to information, paper and pen may be used to capture patient vital signs that must then be entered into the computer, resulting in an inefficient 'double' touch of data. The resulting slow movement of information reduces productivity, requiring either a larger workforce or extended working hours that can lead to low job satisfaction, frequent turnover and additional hiring and training costs. The results can be disastrous, ranging from a delay in response to a patient's call to a medical equipment failure due to a lack of timely maintenance.

The solution: access to mobile voice and data — from the patient room to the battlefield

Motorola's MC75A Series delivers the features and the design required to bring mobile voice and data right to the point of work, in the hospital and in theater. This series is:

- **Easy to use.** While the MC75A is packed with the most sophisticated mobile features and functionality, using the device is second nature, keeping healthcare workers focused on the mission at hand — not the technology.
- **Easy to disinfect.** IP54 environmental sealing and specially designed plastics enable the use of many of the most common disinfectants.
- **Secure.** The MC75A offers government grade wireless security, including encryption via native FIPS 140-2 Level 1 certification, support for the latest authentication protocols and accessories that enable fingerprint and CAC card authentication.
- **Rugged.** The MIL-STD 810G drop test combines with IEC specifications for tumble and sealing, ensuring reliable operation despite exposure to dust, rain and spills as well as drops to concrete from as high as 5 ft./1.52 m.

Streamline end-to-end healthcare applications

The MC75A is designed to improve efficiency and reduce errors throughout healthcare operations, including:

Point of care

- Medication administration
- Patient monitoring
- Specimen collection
- Medical rounds
- Transfusion verification
- Nurse Call

Equipment management and maintenance

- Equipment inspections and maintenance
- Hospital inventory

Field mobility

- In theater triage
- Home healthcare: in-field case management
- Emergency response: patient and incident tracking (FEMA)
- National and international mobile data collection

Applications

This single device can provide a multitude of applications to streamline and error proof everyday processes, including:

- **Mobile point of care solutions** that improve caregiver productivity, task accuracy and patient safety, increasing the quality of care without adding staff.
- **Streamlined asset management and maintenance** for improved operational efficiency, enabling the timely re-ordering of materials and timely and accurate maintenance.
- **Mobile data collection** that helps protect the health of citizens by improving the timeliness of a wide variety of efforts — from FDA inspections to FEMA victim tracking and CDC outreach efforts to help control the outbreak of disease.

Hospitals and clinics: improving the quality of care with mobile point of care (POC)

The MC75A provides caregivers with all the tools needed to perform tasks quickly and accurately. And its healthcare-friendly colors are ideal for patient-facing applications.

Medication administration

The MC75A0-HC provides the real-time information access required to ensure the accurate administration of medication as well as the instant recording of every medication event into the patient's electronic medical record (EMR). A scan of the patient wristband, the medication and a nurse's own ID badge ensures the 'Five Rights' for the medication that is about to be administered. Voice functionality allows caregivers to call the pharmacy or physician to obtain rapid answers to questions. And Internet and intranet access enables doctors and nurses to double-check drug interactions and look up side effects.

Patient monitoring

With the MC75A0-HC, nurses can monitor patient vital signs and the status of medical equipment in the patient's room, regardless of where they are inside the hospital grounds — no need for a nurse to sit at a computer in a centralized nursing station. In addition, real-time alarms can alert a caregiver whenever an adverse patient event occurs, ensuring swift action that can save lives. The ability to view the stream of real-time waveforms — such as an EKG — enables nurses to instantly identify whether the event is truly an emergency or is the result of a sensor that was accidentally disconnected. The result: improved caregiver productivity and efficiency, without compromising the quality of care.

Specimen collection

High-performance bar code scanning functionality documents and error-proofs the end-to-end collection of specimen information. With very little human interaction, clinical staff can accurately record: patient identification; the date and time the specimen was collected and delivered to the lab; the lab technician who performed the analysis; and when the test results were delivered to the physician.

As a result, the right patient receives the diagnosis as quickly as possible, enabling the faster response times and more rapid decision-making that improves the quality of care.

Medical rounds

The MC75A0-HC provides all the tools required to automate, error-proof and improve the efficiency of the medical rounding process — as well as enrich the information set in the patient record. Wireless access to the patient's up-to-the-minute EMR enables physicians to view test results, medication records and patient history — all the information required to quickly and accurately determine the right course of action. Infrared data connectivity enables the automated and highly accurate collection of vital signs from medical monitors with the single press of a button. Tests and medication can be ordered in real time, enabling the fastest response possible to protect patient health and improve the patient experience.

Transfusion verification

The MC75A0-HC automates and error-proofs the end-to-end transfusion process. Scanning a bar code or RFID tag (via a third party snap-on accessory) on blood products enables easy, highly accurate and cost-effective tracking from the moment blood is drawn to the moment it is administered to a patient. Better inventory visibility ensures the right blood products are available at the time of need and that products with the nearest expiration date are utilized first, protecting against costly waste. The ability to scan the patient wristband and transfusion bag ensures patients receive the right blood type — before the transfusion begins. And in the event of a quality issue, end-to-end track and trace data enables hospitals to identify which patients received blood products from a specific donor or lot.

Nurse Call

High performance Voice-over-WLAN (VoWLAN) enables the MC75A0-HC to support wireless Nurse Call, allowing direct communication between patient and nurse. Nurses can continue to move throughout the facility wherever they are required, yet remain attentive to patient needs. Handset and headset modes enable private communications in the event a nurse is in another patient's room. The need for overhead paging systems is eliminated, creating a quieter environment that is more restful for patients and helps nurses to better concentrate on their job.

A powerful anywhere anytime mobile voice connection to anyone

The integrated TEAM Express allows hospitals to provide healthcare workers with a single device for both voice and data. Throughout the day, your entire staff is connected. Nurses carrying the MC75A0-HC can reach physicians, supervisors, lab technicians, patient transporters, IT and maintenance staff — regardless of whether they are carrying another type of Motorola mobile computer, a Motorola TEAM smartphone, or even a 2-way radio operating on a completely different network. And support for PBX integration enables the MC75A0-HC to function as a mobile desk phone, with the complete desk phone feature set.

Asset management and maintenance

The MC75A can streamline and error-proof the tracking and maintenance of the thousands of assets used every day in healthcare, including:

- Consumable items such as bandages
- Medical equipment such as IV pumps, wheelchairs and surgical instruments
- IT assets, office furniture, beds and more
- Physical facilities — from exit signs and fire extinguishers to elevators and the grounds

Asset inspections and maintenance

The ability to capture bar codes and high resolution photos and videos in combination with real-time access to back-end applications improves the efficiency, accuracy and timeliness of asset inspections and maintenance, protecting patient safety and ensuring cost-effective compliance with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) regulations.

Locate assets quickly. Medical equipment, wheelchairs and IT assets are always moving throughout the hospital, making timely inspections and maintenance a challenge — biomedical engineers can spend as much as half their time just locating the right asset. RFID can enable the automatic tracking of equipment as it moves, providing real-time visibility into the whereabouts of each and every piece of tagged hospital equipment. Present location is available at the press of a button. A quick scan of the RFID tag verifies that the right piece of equipment has been located and that the asset is in service — and has not been lost or stolen.

Execute tasks on time. Work orders can be automatically issued electronically on the required date, ensuring that inspections and maintenance tasks are always completed on time. Supervisors can monitor real-time status to identify and address backlogs that could endanger lives as well as compromise



The MC75A provides access to real-time medical records and more, improving productivity and reducing errors at the point of care, from medication administration to specimen collection and transfusion verification.

compliance. And if an asset requires immediate attention, supervisors can modify work order priority with the press of a few buttons.

Improve task accuracy. Inspectors and maintenance engineers can utilize an electronic checklist to improve accountability and ensure the execution of the proper steps and protocol. In addition, a geo-stamped high-resolution color photo appended to the asset file provides proof of service and asset condition.

Improve workforce productivity. Engineers can now access everything they need to get the job done on the MC75A — from electronic work orders to maintenance history, equipment manuals, warranty information and repair routines — eliminating the need to locate and carry files and books to the job site. Electronic work orders can be completed in real time, eliminating the paper trail and its associated data entry errors and lag time that can impact JCAHO compliance. If assistance is needed, integral voice capabilities allow engineers to call a co-worker, a supervisor or a manufacturer service center. The ability to send a detailed photograph or real-time video further improves collaboration. The reduction of administrative tasks enables the same number of workers to complete more work orders daily — improving compliance as well as workforce productivity and utilization.

Hospital inventory

The MC75A allows hospitals and clinics to more efficiently manage and account for inventory — from bandages to medication, knee replacements, medical instruments and office supplies. The rugged MC75A

performs dependably in demanding environments like shipping and receiving, where a quick scan of the bar code or RFID tag (via third party snap-on accessory) can instantly reconcile incoming shipments with original orders. Detailed put-away instructions ensure that items reach their destination and are available for use as quickly as possible. Materials can then be scanned as they are removed from supply rooms and utilized at patient bedside. When low pre-set thresholds are reached, a replenishment order can be automatically triggered, ensuring that needed supplies are always available. The resulting real-time inventory visibility improves the speed and accuracy of the ordering process, reducing the risk of an out-of-stock.

Out in the field: in theater triage, case management and mobile data collection

The MC75A enables accurate collection of data out in the field that can then be instantly uploaded to back-end computer systems upon return to the agency facility. In addition, the large storage capacity can accommodate a wealth of onboard data to enable immediate access to needed information.

In theater triage

The MC75A allows military medics to carry all the information required to perform the best triage possible out on the battlefield. The 32GB capacity user accessible microSD slot provides ample storage for detailed medical records, information on medical procedures and more. With access to patient medical history, medics can check allergies and existing medical conditions before administering care, preventing errors that could further endanger a soldier's life. Access to rich knowledge bases that can include photographs and video footage ensures proper care despite varying levels of medic experience, improving the quality of care for soldiers and reducing the pressures in theater for caregivers. Paper files and manuals are no longer required, leaving more room in the backpack for more critical medical supplies.

If a wireless connection is available in theater, medics can collect and transmit patient vital signs with a digital photo of a wound to obtain expert guidance on the best course of care from a physician back at the base. While enroute to the base hospital, medics can transmit updated information on patient condition and estimated arrival time. The operating room can be prepared, and complete with the right surgeon, materials and medications, enabling faster response times that can help save lives.

Home healthcare: in-field case management

For veterans receiving rehab or other home health services, the MC75A provides visiting nurses and physical therapists with the ability to access and update patient EMRs in real time, eliminating the need to carry paper files and record information on

paper forms that must then be entered into a computer at day's end. As a result, caregivers have more time to spend on patient care. In addition, the ability to take and transmit photos or video of wounds enables real-time collaboration from physicians back at the hospital, improving on-the-spot care decisions. High performance integrated GPS provides these in-field case managers with real-time directions and enables supervisors to track caregiver location, improving safety.

Emergency response: patient and incident tracking (FEMA)

The MC75A can help federal government agencies respond more efficiently to major disasters, such as hurricanes, earthquakes and terrorist-related events. On scene, emergency response teams outfitted with the MC75A and a compatible mobile printer worn on a belt can print and distribute bar coded wristbands to improve patient tracking. Workers can then scan the bar coded wristband and create a detailed record that includes: the health-related information to ensure victims receive the right care on a timely basis and rich identity information, including a color digital photo for positive proof of identification — especially crucial for unconscious patients. Victim management is more efficient, ensuring accurate tracking and proper prioritization for care. Efficiency is increased and patient tracking is more accurate, ensuring that the most severe injuries are prioritized for immediate treatment — families are reunited faster.

National and international mobile data collection

National mobile data collection. The MC75A provides the tools required to streamline and improve the accuracy of data collection in the field. For example, mobile data access can allow Food & Drug Administration (FDA) inspectors to conduct more efficient inspections of pharmaceutical and food manufacturing plants. Real-time access to manufacturer records provides inspectors with the rich information required to perform the best inspection possible — including a complete history of any prior or open violations. The ability to transmit results in real time ensures a swift response to a breach of regulations to better protect the health and safety of the country's citizens.

International outreach initiatives. Outside the country, public health officials in agencies such as the Center for Disease Control and Prevention (CDC) often go door-to-door in remote areas to assess and deliver services that support international efforts to save lives and protect the health of local citizens. With the MC75A in hand, these workers can collect better situational intelligence for faster decision making, more rapid response times and better outcomes.

Electronic real-time surveys enable the rapid collection and transmission of information at each doorstep — for example, in determining the extent of a pandemic outbreak and how swiftly inoculation must take place. In addition, the flexible electronic surveys can be easily modified to collect additional information on emerging medical conditions, improving operational efficiency. Workers vaccinating children in the field can collect and transmit patient information, including a photograph of the child. This prevents administration of duplicate vaccines that could endanger children and increase inoculation costs while giving supervisors the visibility required to better assess and manage the initiative.

Specimen management is also improved. For example, workers collecting blood samples for HIV testing can also collect and instantly and securely transmit detailed patient information, including a patient photo, to the appropriate database. In the event lab results are positive, workers can locate citizens immediately to begin required care to protect the health and the infected individual as well as help prevent further spread of the disease.

The Motorola advantage — the complete solution you need, plus a rapid return on investment (ROI) and a low total cost of ownership (TCO)

When you choose the Motorola MC75A, you get the peace of mind that comes from choosing a leader that has been providing governments and healthcare facilities around the world with trusted mobility solutions for decades — solutions that not only increase agency efficiency but also provide the ROI and TCO required to justify the investment.

You can count on:

- **The delivery of better quality care** — Faster and more accurate decision making, improved caregiver productivity, fewer errors and better collaboration support the rapid delivery of higher quality care.
- **Reducing the time and cost associated with maintenance, repairs and operations (MRO)** — The elimination of paper-based procedures improves cycle times and ensures compliance with government regulations.
- **Mission critical device support** — With Motorola's unique Service from the Start with Comprehensive Coverage, accidental damage to internal and external components as well as normal wear and tear are included at no additional charge, considerably reducing unexpected repair expenses. Advance Exchange Support provides next business day replacement of devices that



The rugged MC75A enables mobile voice and data in one of the most demanding environments — the military theater. Medics can carry solid medical records and knowledge bases that contain photos and videos, ensuring that information on lifesaving procedures is always at their fingertips.

Photo Courtesy of U.S. Army; Photographer Sgt. Matthew C. Cooley, 15th Sustainment

require repair. The result is maximum uptime, maximum device utilization and maximum return on investment (ROI).

- **Low cost remote and centralized management** — Compatibility with the Motorola Mobility Suite enables your IT department to remotely stage, provision, monitor and troubleshoot devices anywhere in the world from virtually any centralized location, dramatically reducing one of the highest mobility costs — day-to-day management. And Motorola's AppCenter prevents unauthorized device usage and reduced productivity by choosing which device features and software applications workers can access.
- **A simplified lower-cost mobility architecture** — The convergence of multiple technologies allows the MC75A to take the place of a cordless phone, scanner, camera and desktop computer. Fewer devices to purchase and manage reduces capital and operational expenses. Compatibility with existing MC70 and MC75 accessories further simplifies the mobility architecture and preserves investments in existing Motorola mobility solutions.
- **A unified mobility platform** — Since Motorola mobile computers are built on a common standards-based platform, existing applications running on other Motorola mobile computers can be easily ported to the MC75A — and the applications you develop for the MC75A can be easily ported to future Motorola mobile computers. As a result, you can confidently invest in application development, knowing that the applications you have in place or create today will deliver a maximum lifecycle and a maximum ROI.

The MC75A: an ideal choice for Federal Government healthcare applications



Many differentiating features make the MC75A the best choice for Federal Government healthcare initiatives, including:

1. **Native Certified FIPS 140-2 Level 1 validated cryptographic module.** Ensures government-grade security while simplifying integration and providing better interoperability.
2. **Government-level credentialing.** Accessories that enable the use of CAC cards and fingerprints for credentialing provide robust integrated identity management, ensuring that only properly authorized personnel can unlock and use the device.
3. **Disinfectant ready housing.** IP54 sealing and specially selected plastics provide a hygienic design that allows safe wipe-downs and sanitizing with many commonly used disinfectants, without harming the housing or the sensitive scanning components.
4. **Field proven ergonomics.** This compact, lightweight and rugged device is easy to hold and easy to use — crucial in healthcare applications inside the hospital walls, out in the field and even in theater.
5. **Easy to view full color screen.** The 3.5 in color high definition 640x480 VGA display incorporates the latest in LCD technology for easy viewing of high resolution images such as patient photos, procedure videos and equipment schematics, even in bright sunlight.
6. **Most robust data capture possible:** The ability to integrate both a 2D imager and a 3.2 MP camera enables easy capture of virtually any bar code (including damaged and poor quality codes), still images, videos, signatures and documents as large as 8.5 in. x 11 in., complete with legible fine print.
7. **The most robust rugged specifications.** The 5 ft./1.5 m drop specification, 1000 x 1.6 ft./0.5 m tumble specification and IP54 sealing rating meet or exceed MIL-STD and IEC applicable specifications, creating the most rugged field proven device in the EDA category for a superior lifecycle and total cost of ownership (TCO).
8. **IrDA infrared interface.** Provides a direct interface with a wide variety of medical equipment, enabling the automatic and highly accurate collection of patient vitals and waveforms from EKG and other medical monitors.
9. **Motorola MAX Sensor.** Motorola Interactive *Sensor* Technology (IST) provides dynamic screen orientation for better viewing and easier data entry, the ability to recognize and preserve power whenever the device is not in use to preserve battery power, plus the ability to use the data in custom applications — for example, the length and duration of a fall can help automatically detect and report a potential 'man-down' situation.
10. **The most performance power:** The 806 MHz processor combines with 256MB RAM, 1GB Flash and user-accessible expandable storage up to 32GB offers maximum processing power in this device class, providing the power to run virtually any application.

See the MC75A Specification Sheet posted on www.motorola.com/mc75a for a complete list of features

For more information on how the MC75A can help improve the efficiency and effectiveness of health-related initiatives in your federal government agency, please visit us on the Web at www.motorola.com/healthcaremobility, www.motorola.com/MC75A or access our global contact directory at www.motorola.com/enterprisemobility/contactus



MOTOROLA

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